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THE CYSTICERCI OF THE TÆNIA.

(Continued from page 324.)

CYSTICERCI of the tænia have frequently been found in the brain and in the meninges, though often confounded with the hydatid-like cysts of the choroid plexus. The fibrous cyst which contains them is generally very thin. When they are not massed in too great a number, and when they do not provoke inflammatory phenomena, they ordinarily do not determine marked changes. In other cases, symptoms of meningitis or of cerebral compression are observed, such as cephalalgia, fever, agitation, delirium, convulsions, trembling of the limbs, paralysis, prolonged faints,* coma. These symptoms may decrease and disappear during a longer or shorter time, or they may urge on death with greater or less rapidity.

Observations of cysticerci in the brain or in the meninges have been made by Laennec,† Rudolphi,‡ Himly,§ Louis,|| Chomel,¶ Bouvier,** Krauss,†† without any special symptom provoked by their presence being observed during life. Dubrueil,‡‡ also, found them in the brain of an executed criminal. Forget§§ met with numerous hydatids (cysticerci?), free or but slightly adherent to the pia mater, over the surface of the pons Varolii, of the upper portion of the medulla oblongata, and under surface of the cerebellum, in a man 80 years old, who for six months had been troubled with fatigue and pains in his limbs, and with cephalalgia. This man was subject to attacks of epilepsy, his expression stupid,

* In a case mentioned by Lebert in the *Bulletin de la Société Anatomique de Paris*, 1837, p. 38.

† Loc. cit.

‡ Loc. cit.

§ Loc. cit.

|| Louis. *Recherches sur la Phthisie*, Paris, 1843, p. 162.

¶ Dictionnaire de Médecine, en 30 vol., Art. Hydatides.

** Bulletin de l'Académie Royale de Médecine, 1840, t. iv., p. 556.

†† Damerow's Zeitschr., t. x., 2e fasc.

‡‡ Gervais et van Beneden, *Zool. Med.*, t. ii., p. 250.

§§ Gazette Médicale de Strasbourg, 1846.

his vision and hearing sensibly diminished, his walk feeble and tottering, his urine passed involuntarily. Diarrhœa was added to his ills, and the patient died after a progressive diminution of strength and a serous infiltration of the extremities.

Dubious observations of cysticerci, analogous to the preceding, in which the precise characteristics of the parasites were not noted, have been made by Treutler,* Aran,† Brera,‡ &c. Davaine and Duplay§ have found eight or ten cysticerci disseminated in the meninges and in the substance of the brain of an old man insane for ten years.

Calmeil|| observed many cysticerci at the surface of the left hemisphere of the brain, and four in the substance of the right hemisphere, in a man 47 years old, who had presented, during the last six weeks of his life, various symptoms (somnolence, agitation of the jaws, delirium, feebleness) attributable to the irritation and compression of the brain.

In another case Calmeil¶ found three cysticerci on the surface of the right hemisphere of a young man occasionally subject to attacks of epilepsy and maniacal delirium, who died from phlebitis following phlebotomy.

In one other observation of Calmeil, a patient who lived only four days at the infirmary of Charentone first complained of a severe pain in his right leg, and almost immediately became delirious. The third day a tremulous agitation of the lips was noticed, the intellectual faculties still remaining disordered. The face was gorged with blood, the pulse strong, the respiration loud and painful; the large ventricles contained two cysticerci.

Leudet** has reported the case of a woman, 28 years old, subject to attacks epileptic in form, during the last three years of her life; cephalalgia was constant, and her vision was considerably diminished. She died with acute cerebral symptoms. At the autopsy, seventeen cysticerci were found in the pia mater, in the grey substance of the surface of the cerebrum, the corpora striata, the thalami optici, and cerebellum. Twenty cysticerci were found in the muscles of the upper extremities.

Drewry Ottley†† has related the history of a woman, 40 years old, who for some months was subject to giddiness, and who was seized with numbness and demi-paralysis of the right upper extremity, accompanied by disturbed intellect and memory. These, however, disappeared after scarification. Shortly after, the giddy turns greatly increased and she was frequently convulsed, losing consciousness entirely. Towards the end of her life she had con-

* Treutler. Obs. pathol. anat. in helminth. hum. corp., Lipsiæ, 1793.

† Archives Générales de Médecine, 1841, 3e série, t. xii.

‡ Brera, Lezioni, med-pratt, &c., Crema, 1802.

§ Davaine. Traité des Entozoaires, Paris, 1860, p. 660.

|| Journal Hebdomadaire de Médecine, Paris, 1828, t. i., p. 44.

¶ Comptes Rendus de la Société de Biologie, 1re série, t. v., 1853, p. 24.

** Dictionnaire de Médecine, en 30 vols., Paris, 1835, Art. Encéphale, p. 584.

†† Gazette des Hôpitaux, Paris, 1848, p. 149.

stant, though not extremely acute headache. The convulsive attacks became more and more frequent, and the patient succumbed to them at the end of the third year of her illness. At the autopsy, the pia mater was found to be studded with a large number of cysts, covering the surface of the hemispheres and penetrating between the convolutions of the cerebrum. The cysts, whose size varied from the size of a pea to that of a barley corn, existed principally over the left hemisphere. They were sunken in the gray substance of the convolutions, but none were found in the white substance. These cysts were vesicular worms, composed posteriorly of a semi-transparent vesicle, and anteriorly of a cylindrical prolongation, retracted in the vesicle like a finger of a glove, and pushed out by compression. This elongated portion was furnished at its extremity with a double row of tenacula, about which were four oral suckers. The little worm had all the characteristics of the one described by Rudolphi under the name of *C. cellulosa*. Bränniche* gives the following observation. A servant, forty-three years old, an epileptic for three years, entered the hospital May 3d, 1851. These notes were taken of her case. Cephalalgia of the left fronto-temporal region, somnolence, diminution of power of vision, sensations of sparks in right eye, unequal dilatation of pupils at times, strabismus, cerebral faculties enfeebled, loss of connection of ideas, hallucinations, speech difficult and slow, frequent vomiting, constipation, involuntary excretions, pulse slow, loss of power in upper extremities to a certain degree. She died the 21st of May. At the autopsy, three worms were found in the brain. The largest was lodged in the tissue of the anterior lobe of the left hemisphere, in a cavity somewhat larger than a hen's egg. This cavity encroached upon the anterior part of the lateral ventricle, and compressed the antero-external portion of the corpora striata; it was covered with a thin, transparent and vascular membrane. The worm was completely enclosed in this cavity, not adherent to it in any portion, and was composed of three parts, (a) an elongated sac as large as a small nut, filled with a yellowish liquid, containing a white body apparently adhering by its base to one of the extremities of the sac, where, on the outer surface, was a very small opening, hardly large enough to permit the passage of a bristle. From the extremities of this sac sprang two other sacs, one of which (b) was the size of a nut, the other (c) the size of a hen's egg.† They contained a limpid, uncolored liquid, and had no apparent communication. Immediately behind this worm, in the middle part of the left hemisphere, existed a sac the size of a nut filled with liquid, prominent on the surface of the hemisphere, and adherent to the dura mater. The third worm, the size of a hazel-nut, was found at the end of the right hemisphere; it was enclosed in an organized membrane, but not adhe-

* Hospitals Meddelelser, t. iv. Schmidt's Jahrb., t. lxxviii. p. 171, 1853.

† These appendages appear accidental. The parasites were probably very old

rent to it; it contained a clear yellowish liquid in which were small whitish corpuscles. At one of the extremities of this sac was a punctiform orifice conducting to the middle of a whitish body analogous to that of the first worm. This body was adherent to the inner part of the sac, where it was constricted. The wall of this body had about $0^{\text{mm}},35$ of thickness, and its inner surface was closely plaited. The walls of the three entozoa examined by the microscope appeared finely cellular, with numerous collections of particles, which on a chemical examination showed the presence of chalk. At the summit of the right lung was a cavity the size of a nutmeg, containing a yellowish concrete matter, surrounded by a membrane partially incrustated with calcareous salts. The lungs were free from tubercles. The parasites bore an exact resemblance to those of the *C. cellulosa* as described by Brünniche.

The following observation of Delaye* is remarkable for the volume of the caudal extremity of the cysticercus. An old soldier of the Imperial Guard, 58 years old, experienced his first attack of epilepsy in 1848; a second attack occurred in 1849, and a third at the commencement of February, 1850. When received at the Hotel Dieu, he complained of a buzzing in his ears, and of torpor and feebleness of his lower limbs. A strengthening regimen diminished these symptoms, but after the 26th of February the epileptic seizures occurred each day. The remedies employed were followed by no relief, and he died the 6th of March. At the autopsy, a body the size and form of a pigeon's egg was found in the left ventricle of the brain, lying on the corpora striata, depressing the optic thalamus, and united to the cerebral substance. This oval body had a smooth surface and was analogous to the inner envelope of an egg; it was transparent, containing a limpid liquid in which was floating a rounded vesicle. The texture of the external bladder was apparently fibrous. The walls of the internal bladder were thinner, more delicate, and yielded at the slightest contact. They contained a lemon-yellow liquid, in which floated, attached to the inner surface, a small cylindrical body from ten to twelve millimetres in length. By the microscope, it was evident that the cylindrical body was formed of numerous rings, broad and rounded at their free extremity like the articulations of the tænia, and a small body formed like a wart furnished with a double row of tenacula.

Nivet† observed two cases of cysticerci in the brain and meninges. Fourteen cysts were found in the meninges and in the cerebral substance of a man 43 years old, who died after twelve days of illness following considerable agitation and delirium, though previously he had never apparently suffered an epileptic attack. In a man 56 years old, a pig-butcher by profession, subject at long

* Journal de Toulouse, Mai, 1850. Schmidt's Jahrb., t. lxxviii, p. 201, 1850.

† Archives Générales de Médecine, série 4, t. vi., 1849, p. 478.

intervals to epileptic attacks, and dying accidentally from a phlegmonous erysipelas of the left lower extremity, were found at the autopsy eight cysts in the meninges and substance of the brain, and many others in the iliac and psoas muscles, as well as in the muscles of the abdominal parietes.

In the first case, says Nivet, the tube-like part was encircled by a crown of radiating black fibres, supposed to be hairs, and the suckers were of a black color, while in the second case they were without color.

Aran* observed the cysticerci (supposed by him to be acephalocysts) in a man fifty-three years old, who, six months before his death, was deprived of his reason, accompanied by a hemiplegia of the right side, without any apparent cause, but which disappeared after a copious bleeding. Five months later, a new loss of reason and paralysis of the left side occurred. By bleeding, the paralysis was much diminished, but delirium and agitation succeeded. On the night of his death, twenty epileptic attacks followed each other at intervals of five minutes. At the autopsy, the pia mater was found injected, and containing numerous half or wholly transparent bladders, which had for the most part burrowed cavities in the cerebral substance, or were prominent at the surface of the convolutions, and in the body of the brain. All these vesicles contained a transparent liquid, and in the centre, a small white hanging point, which, examined by a microscope, revealed neither head, sucker nor caudal prolongation. The other organs could not be examined.

In December, 1860, I accidentally found many cysticerci of the tænia solium in the pia mater, and in the body of the cerebral substance of a vigorous man fifty-one years old, who had been deaf and dumb from infancy, whose intelligence was quite limited, a laborer by profession, and who died with pneumonia. The convex surface of the hemispheres and the base of the brain were covered with milk-like patches of considerable extent, but not constantly continuous. These were thicker at certain points corresponding to the situations of the cysticerci, eleven or twelve in number. One of these escaped from the cranium as soon as the dura mater had been incised and drawn aside, its cyst being accidentally broken. The cysticerci, in the form of small vesicles from twelve to sixteen millimetres in diameter, were nearly all lodged in the pia mater, between two cerebral convolutions, as much to the right as to the left, irregularly strewn over the surface of the brain. Two of them were found encysted in the body of the white tissue of the centrum ovale, towards the left. Another was encysted in the thickness of a cerebral convolution adherent to the pia mater, at a point where this membrane was quite thickened on the right; this parasite was shrivelled, mummified, ovoid, only measuring one centimetre in length, by five

* Archives Générales de Médecine, 1841, 3 série, t. xii. (Mémoire sur les Hydatides de l'Encéphale), p. 90.

millimetres in breadth. Another mummified cysticercus was found imprisoned in the midst of a cicatricial tissue in the white substance of the centrum ovale, near the convolutions. One of the cysticerci, situated in the thickness of a convolution, betrayed itself externally by a semi-transparent prominence. Finally, a cysticercus bi-lobed, or constricted at its middle part, probably by a vessel which passed across it, or by a fibrous bridle, as is generally observed when the parasite has an irregular form, was confined in the choroid plexus. All the cysticerci were enclosed in a very thin fibrous cyst, adhering intimately to the cerebral substance, or to the pia mater by fibrous and vascular prolongations, so that they could be enucleated, still preserving a portion of pia mater or of nerve tissue adherent to their surface. Upon the surface of the cysts were frequent anastomosing vessels, quite dilated. In the neighborhood of the cysts, the vessels of the cerebral tissue were very plainly injected. Except these the cerebral substance did not offer any sign of vascular congestion. The cysticerci were in immediate contact with the walls of their fibrous cysts. Their bodies, perfectly transparent, had a slight grayish hue. Invaginated in the caudal extremity, they presented themselves in the form of vesicles of twelve to sixteen millimetres in diameter, spherical, or slightly ovoid, one bi-lobed, according as they were able to develop themselves. They reproduced the form of the fibrous cyst. Each vesicle offered at a point of its surface a small, very narrow orifice. This orifice was continuous with a cylindroid mass, enlarged at its extremity, semi-transparent, opaline, which was balanced in the middle of the liquid enclosed by the delicate wall of the vesicle. In one of the vesicles which was incised, could be observed, for a certain time, vague movements caused by the influence of a gentle heat and mechanical irritation. Upon the circumference of the cylindrical portion, small whitish lobules were seen, arranged irregularly, and grouped especially in the vicinity of the vesicle. These whitish lobules were formed by very slender globules, whose *ensemble* constituted probably the sperm-producing glands. The cephalic extremity of the cysticerci was retracted in the interior of the cylindrical mass by a double invagination (like a glove-finger, pushed back upon itself) parallel to its axis. The isolated cysticerci were three and a half to four millimetres in breadth. The head measured about 0^{mm},6 in breadth, and the neck, immediately below the head, 0^{mm},25. The neck became very rapidly larger, and reached a breadth of from two to three millimetres. It then presented well marked transverse folds, and contained in its body numerous oviform corpuscles. The head, of a rounded form, was furnished with four suckers of 0^{mm},35 longitudinal diameter; it was terminated by a rostellum of 0^{mm},15 in diameter, around which was arranged a crown of twenty-four tenacula, twelve large and twelve small, placed side by side and alternating, their points

directed externally, their concavity directed backwards and applied to the side of the head. The tenacula had a massive form; their apophysis was situated at an equal distance from the two extremities. The large tenacula, 0^{mm},18 long, were 0^{mm},05 broad at the apophysis; the hook, 0^{mm},10 long; the manubrium, 0^{mm},08. The small tenacula, 0^{mm},13 long, were 0^{mm},05 broad at the apophysis; the hook, 0^{mm},07 long; the manubrium 0^{mm},06. The cysticerci extracted from their cysts, and immersed in water, grew rapidly white. Their epidermoid covering became swollen, opaline, and soon separated in a flake-like mass. An analogous change soon took place in the interior of the body. The liquid contained in it became troubled by the organic detritus which was detached from the inner wall of the caudal vesicle. When the cysticerci enclosed in their fibrous cyst remained in pure water for one or two days, a certain quantity of liquid passed by endosmosis through the cyst, and accumulated between this last and the body of the cysticercus. The cyst became more and more dilated, and finally burst. In no part of the thoracic or abdominal viscera, nor in the muscles or cellular tissue, were any cysticerci found. The liver and the lungs, very carefully examined, did not contain a trace of them. The intestines were free of tænia. As in the majority of cases thus far observed, so in this observation the cysticerci were discovered by chance.

It was impossible to obtain from the parents of this deaf and dumb man, any history of peculiarities noticed in his mental or physical health, at the time of the invasion, or during the sojourn of these parasites. During the last years of his life, he enjoyed very good health.

In a woman eighty-two years old, who died from pneumonia, I found five cysticerci of *tænia solium* in the brain and its membranes. Three of them were more or less mummified. The cyst of one was incrustated with calcareous salts. The two parasites intact were, one seventeen millimetres, the other nine millimetres in diameter. Their tenacula, thirty-two in number, resembled those described in the preceding observation. The large tenacula were 0^{mm},16 in length, and 0^{mm},056 in breadth; the small were 0^{mm},13 long by 0^{mm},045 broad; the rostellum measured 0^{mm},24, and the suckers 0^{mm},45 in diameter. Deposits of pigment in some abundance were scattered about the circumference of the tenacula. The extremity of the head showed distinctly the contour of the cephalic vesicle that is observed in certain tæniæ. Between the cyst and the parasite, and in the interior of the caudal vesicle, existed an abundant detritus of a whitish color, formed from the remains of the epidermis and chitine. The invaginated portion was surrounded by a well-developed lobulated and whitish mass. The wall of the cyst of one of the intact parasites, which was situated in the white tissue of the brain, was remarkable for its thickness, two millimetres. The parasites

appeared to be quite old. No functional troubles of the brain were observed during life. In the rest of the body there was no trace of the cysticercus.

Frédault has given the name of trachelocampyle to a species of cysticercus, that may be considered similar to that observed by Günsburg, also found by myself, and which I have called *C. turbinatus*. The parasites described by Werner (*T. eremita hydatigena*) belong to the same category of observations.

The observation of Frédéric,* at the time an interne at Hotel Dieu, related to a woman 84 years old, who never had experienced any cerebral trouble, till she was suddenly attacked by apoplexy, and succumbed in a few hours. At the autopsy, the sub-arachnoid cellular tissue was found distended with serum, in which some twenty small, rounded or ovoid bodies were swimming(?); these were white and semi-transparent, having a diameter of six to fifteen millimetres. Many others were half or wholly engaged in the gray substance, though not adhering to it. None existed in the vesicles. Apparently the other organs were not examined, as no mention is made of them. When the vesicles were opened, a small, oblong body, from five to eight millimetres in length, and from three to five millimetres in breadth, adherent to them, and surrounded by a milky fluid, was seen. The vesicle presented no external orifice(?), it was smooth within and without, with the exception of some points of its external surface, which were velvety. The cephalic extremity, narrowed like the neck of a bottle, was curved like a crosier, presented a free extremity flattened, which may be considered the head, being furnished with a crown of twenty-four tenacula from 0^{mm}.07, to 0^{mm}.10 in length, and four suckers of 0^{mm}.148.

In a man 49 years old, dying with pneumonia, Günsburg† found eight vesicles as large as cherries. Some were situated on the convex surface of the right hemisphere, partly free(?), between the pia mater and the internal membrane of the arachnoid, partly adherent to the convolutions by prolongations from the pia mater. The others reposed on the right side, upon the optic thalamus and the corpora striata, which were deeply depressed by these vesicles. The pia mater was infiltrated with liquid, and a whitish exudation, offering resistance to the convex surface of the brain. (The subject of this observation entered the Hospital for a fracture of the arm, attended with well marked tetanus. Later he was attacked with pneumonia and pneumothorax, and succumbed after a general infiltration of the cellular tissue. The infiltration and the milky patches of the pia mater ought not to be attributed to the parasites. The same remark applies to the other cadaveric lesions spoken of.) The vesicular bodies, except those swimming freely, were formed, 1st, by a fibrous layer of recent formation covered with capillary vessels; 2d, by an inner mem-

* Gazette Medicale, Paris, 1847, p. 311.

brane free from adhesions, of a yellowish white color, separated from the external fibrous layer by a limpid serous liquid, consisting of concentric amorphous layers; its inner surface covered with refracting globules, insoluble in acetic acid, while the rest of the membrane, in nature fibrinous, was soluble in this reagent; 3d, by an amorphous membrane, apparently fibroid, distended by a clear and transparent liquid; 4th, by the body of the parasite 4 to 6 millimetres long, of a yellowish white color, folded and curled up on itself, fixed against the preceding membrane. In carrying an incision through the body of the parasite, it was evident that its form was very analogous to that of the nautilus. By the eye could be distinguished a head of elliptic shape, separated by a restricted part from the rest of the body. At the centre of the head was an orifice from $0^{\text{mm}},3$ to $0^{\text{mm}},4$ in diameter, through which projected a crown of tenacula. At their base were four oral bodies or suckers, finely granulated. The suckers were formed by a layer of spiral fibres (?), and their cavity provided with vibratile cilia salient and directed outwards (?). In the more mature individuals a deposit of pigment was seen about the terminal orifice. The wall of the body was studded with a large number of refracting globules of various sizes, without any apparent contents. The older parasites contained rounded corpuscles of concentric layers, some of which were furnished with an opaque nucleus. Günsburg considered them as bourgeons.

Nega, following Günsburg, appears to have met some sixty parasites analogous to the preceding, at the autopsy of a man forty years of age, who never had shown any symptom attributable to a lesion of the brain.

(To be continued.)

ON ATMOSPHERIC CORPUSCLES.

By M. F. POUCHET.

I HAVE thought for a long time that the study of the bodies conveyed by the air into the respiratory passages of animals would offer interesting physiological results, and throw considerable light upon the subject of atmospheric micrography. Nor have I been deceived in this. In fact, in almost every class of animals, the examination of the respiratory apparatus clearly reveals the various modifications of the medium inhabited by them. But it seemed to me that the most important notions on this subject would be presented in those animals in which the air penetrates most deeply into the organism. Birds, consequently, have become the objects of particular attention, seeing that in them the air, after traversing the lungs, pervades not only the different cavities of the trunk, but reaches also the interior of the osseous system. In these animals I have devoted particular attention to the exami-

nation of the bones which contain most air, and chiefly to the *humerus*. And as in these situations the corpuscles, once introduced, escape only with great difficulty, owing to the immobility of the walls and the irregularities of their anfractuositities, we there find ample vestiges of all the matters conveyed by the air into the respiratory organs.

The examination of animals living in midst of towns, and in the interior of our dwellings, will excite surprise by the enormous quantity of starch-grains contained in their respiratory organs. In birds, corpuscles of this nature will be discovered in great abundance, even in the interior of the bones, and together with them will be observed, in profusion, particles of sooty matter, and filaments derived from the various fabrics of which our clothes are made. But the further the creature lives from towns, the more remote and wild its habitation, the more rare also become all these corpuscles in the inspired air. Under these circumstances, scarcely any traces of the sort can be observed. Frequently even not a single particle of the kind in question will be observed in animals or birds living altogether in the midst of forests; in these animals, on the other hand, the whole respiratory apparatus is filled with abundant *débris* of plants,—epidermis, chlorophyll, &c.

The amylaceous particles disseminated either in the atmosphere or in the interior of animals present two conditions—they are either of the normal state or cooked. In the majority of cases, the starch is found in the former condition; but, nevertheless, we frequently meet, in the atmosphere, and in all the cavities of animals, into which the air enters, with starch-grains either simply swelled or entirely burst, by the action of heat. The latter certainly proceed only from minute particles of bread carried about by the movements of the atmosphere. The panified starch is readily recognized by its enormous size and ruptured condition, and by the action of iodine, which does not produce in it the same bright color as it does in ordinary starch-grains.

The birds which inhabit the interior or live in the close vicinity of towns do not obtain this abundance of amylaceous particles simply from the air they inspire; they derive, besides this source, an abundant supply from the foliage of the trees amidst which they pass part of their lives. In fact, on examining the surface of the leaves of trees in the neighborhood of cities, when they have not been washed for some days by rain, abundance of specimens of every sort of corpuscles carried in the atmosphere will be found on them, and, universally, a considerable quantity of starch-grains, together with sooty and siliceous particles. On a single leaf of a horse-chestnut growing in the garden of Ecole de Médecine at Rouen, I have counted about thirty grains of wheat-starch either in the natural or panified condition.

The search for atmospheric corpuscles, in the respiratory pas-

sages is easily made. It consists simply in the passing of a stream of water through these passages, and the collection and examination of the fluid. For this purpose I inject the trachea, by means of a syringe, and when the lungs are distended with water, make incisions into them, and carefully collect all the fluid that escapes, repeating the injection several times.

In birds, I inject the trachea, and when the water has traversed the lungs and filled all the air cavities of the body, I open the thoracic cavity, and collect the liquid, which escapes in a jet. In all the experiments the fluid is received in conical vessels with a narrow bottom, and when sufficient time has elapsed to allow all the corpuscles to subside, these are removed by means of a very slender pipette, and submitted to microscopic examination. The atmospheric corpuscles may be collected from the hollow bones by the same mode of procedure. To effect this, I insert the tube of a syringe into the orifice by which the air penetrates into the cavity, and then make a section of the bone at the opposite end. The water injected, at first gently and afterwards with great force, in order to carry along with it the smallest corpuscles, is received in champagne-glasses and examined. Studied in this way, the respiratory organs afford a faithful idea of the life of the animals. Not only does the examination reveal to us what sites of habitation the animals prefer, and their kind of food, but even, when they are domesticated, the profession followed by their owners.

I have found in the air-passages of man the same atmospheric corpuscles as are met with in animals. In the bodies of two persons, who died in one of our hospitals, a man and a woman, whose lungs I injected, I found a large quantity of wheat-starch, either normal or panified; particles of silix and of glass; fragments of dye wood of a beautiful red color; fragments of dress, lastly a larva of a microscopic arachnidean, still living.

It was rational to conclude that, at certain times, the expectoration should contain corpuscles, similar to those I have described in the lungs. And this is actually the case; I have here met with normal and panified starch-grains, particles of soot, the débris of plants, filaments of wool or cotton of various colors, particles of silix, &c.

A fowl, brought up in a paved court at Rouen, afforded in its respiratory sacculi an enormous quantity of wheat-starch, normal and panified. Besides which they contained numerous filaments of cotton and of linen, and an abundance of sooty particles; there were but very few siliceous grains, a circumstance probably owing to the habitation in which the bird had existed. The humerus of this bird also contained much starch, particles of soot, a considerable number of cotton and linen filaments, and even some grains of potato-starch and of glass.

Thinking that in animals living in localities where starchy mat-

ters formed an object of trade, the abundance of amylaceous particles would be still greater, I procured two young chickens which had been kept for two months by a baker. My surmise was not unfounded. The whole of the respiratory organs in these chickens, notwithstanding their youth, contained an amount of starch surpassing that which I had found in the fowl.

A pigeon taken from a dovecote in the middle of the town presented, in its respiratory passages, besides particles of silix and soot, the débris of stuffs of various colors, and grains of potato-starch, together with considerable amount of wheat-starch of all sizes, and above all, an enormous quantity of lentil-starch. Even the *humeri* contained so much of the latter that from eight to ten grains were found in every case. I was unable to explain the presence of such abundance of lentil-starch in a bird which always swallows seed without bruising it. But I very soon discovered the source on examining the floor of the dovecote. This was completely covered with the dung of the pigeons, containing an enormous quantity of this sort of starch, which had passed through the intestines unaltered. In flying about in their dwelling, the birds diffused this in the air, and it thus gained an entrance into their respiratory organs.

The examination of a bird which is ordinarily kept only in wealthy establishments, affords another proof of what has been said. In fact, the numerous vestiges of magnificent stuffs exhibited in its respiratory organs manifestly recalled the luxurious dresses or works of those amongst whom it had lived. This bird was a peacock. Unfortunately I had at my disposal only its *humeri*; but having injected them, I was really struck with the abundance of, and the splendid colors presented by, all the fragments of stuffs contained in these bones. I found besides a considerable quantity of wheat-starch, numerous filaments of wool and of silk of the most magnificent blue, of a beautiful rose, and bright green.

The lungs of a mouse also afforded starch, silix and soot, but in far less quantity and in far smaller fragments, than in birds.

But if our attention be directed to wild birds, residing at a distance from cities, we observe a totally different thing.

A grey falcon (*Falco cinereus*, Mont.) killed in a large forest two leagues from any habitation, did not afford the least trace of starch, either in its air-passages or within the bones. There were met with only a few particles of soot and silix; and not a single filament of any kind of tissue was recognized. But, on the contrary, all the air-passages were filled with an abundance of the detritus of plants and débris of insects.

In another wild bird (*Picus viridis*, Linn.) I found in the air-passages only an insignificant quantity of starch, and very little soot and silix.

In some frogs taken in the basins of the Jardin des Plantes, at

Rouen, which is situated close to numerous factories, and in a populous quarter, the lungs have always afforded a notable quantity of starch, an abundance of particles of charcoal and coal-soot, together with numerous fragments of silex and vegetable débris. Besides these, filaments of cotton, raw or manufactured, were extremely abundant. The respiratory organs of these animals also contained *Naviculæ*, diatoms, papilionaceous scales, the stems of mucedinous fungi, and fragments of confervæ.

If, again, we explore the respiratory passages of some animals, which although living in a state of liberty, are in the habit of frequenting our dwellings, we find in them evident vestiges of their double existence, wild and domestic.

A jackdaw afforded a striking instance of this. Its respiratory organs contained a very considerable quantity of wheat starch; what was very remarkable, an enormous number of sooty particles—a circumstance which is accounted for by the almost habitual abode of this bird on the lofty buildings of towns. There were found also, in its air-sacs, numerous filaments of cotton and abundant débris of plants.

In all my observations, which, without exaggeration, might be counted by hundreds, I have never met with either a *single spore* or a single ovum of a microzoon, nor with any encysted animalcule. Moreover, in all these minute researches I have always been able to detect starch-grains wherever they existed. Is it possible that the atmospheric spores and ova alone should have escaped detection? The ova of certain *Paramæcia*, being .0420 mm. in diameter, and consequently surpassing considerably in bulk the largest grains of wheat-starch, whose diameter does not exceed .0336 mm., if they really existed in the atmosphere in sufficient quantity to explain the generation of Infusoria, whose apparition astonishes and stupefies us, should have been immediately discovered in the same situations, and far more easily even than the starch-grains, seeing that they ought to exist in much greater numbers. To a negation, of this kind, in the actual state of science, but one answer is possible—*show these ova*.—*Comptes Rendues*, 1, 1860.—*Quarterly Journal of Microscopical Science*.

Bibliographical Notices.

A Practical Treatise on Phthisis Pulmonalis; embracing its Pathology, Causes, Symptoms, and Treatment. By L. M. LAWSON, M.D., Prof. of Clinical Medicine in the University of Louisiana; Visiting Physician to the New Orleans Charity Hospital; formerly Professor of the Theory and Practice of Medicine in the Medical College of Ohio, &c. Cincinnati: Rickley, Mallery & Co. New York: S. S. & W. Wood. 1861. Pp. 567. 8vo.

THIS is a thorough and complete work on this ever interesting and important subject. It is specially valuable as being treated from an

American point of view, by an American observer, who writes from his own personal experience and observation. Hitherto we have depended almost altogether for our comprehensive treatises on phthisis upon the labors of our profession in Europe. We rejoice that we have here at last a book based on the phases and history of this fatal disease as it is seen here. America constitutes a distinct field for its study, from the circumstances of its peculiar social organization, the special habits of its people, and the various and opposite climatic influences to which they are exposed. From the great variety of soil and climate which it offers, there is the very best opportunity for a careful and accurate study of the causative and curative influences which they may exert upon it. Thus there is plenty of material for a valuable and practical work on the subject.

The volume before us is written in a truly philosophical spirit. It is not a mere compilation of the labors of others. It bears, throughout, evidence of being the ripe fruit of the author's personal labors and thought. The subject of the etiology of phthisis is treated in a most able manner, and contains very interesting and valuable statistics of the existence of this disease in different parts of the U. States.

The subject of the selection of a residence for consumptives within the limits of the United States, is treated as fully as the means at command permit, but the result only shows how much is needed to clear up the whole subject. It is very certain that heretofore such patients have often been sent to localities most unfavorable for their recovery or improvement. We can hardly think, for instance, of the Mammoth Cave incarceration, to which, a few years since, these poor sufferers were many of them doomed for months at a time, without a shudder. It is something to learn how little we really know on the subject. What facts there are, Dr. Lawson has gathered and made the most of. This is a field of professional inquiry which most urgently demands laborers, and our professional brethren throughout the length and breadth of the land could not do a better service to our people than by collecting and publishing all the information bearing upon the question in their own individual localities.

In speaking of the etiology of phthisis, the important question of the influence of stimulants as a preventive or cause of the disease, and subsequently their use in the treatment of its various stages, is very sensibly treated by the author.

In the department of therapeutics, special attention is paid by Dr. Lawson to the different stages of the disease, so as to attain, as far as possible, to a scientific completeness. "Particular reference has been made," to use the words of the author, "to the forming or precursory stage, which, it appears to me, has been too much neglected by systematic writers." The whole volume is a credit to our medical literature.

Lives of Eminent American Physicians and Surgeons of the Nineteenth Century. Edited by SAMUEL D. GROSS, M.D., Professor of Surgery in the Jefferson Medical College of Philadelphia. Philadelphia: Lindsay & Blakiston. 1861. 8vo. Pp. 836.

THIS handsome and interesting volume, in the words of the Editor, "owes its origin to a desire, on his part, to popularize the profession, and to place its services and claims more conspicuously than has yet been done, before the American people." Following in the path of

Dr. James Thacher and Dr. Stephen W. Williams, Dr. Gross offers the present volume to supply, to some extent, the deficiency which exists in our literature of Medical Biography since the publication of the work of Dr. Williams, in 1845. It contains biographical sketches of thirty-two distinguished members of our profession, from all parts of the country, seven of them being sons of New England. We most heartily approve of the patriotic motive of Prof. Gross, and the profession are under lasting obligations to him for the manner in which he has carried out his plan. His volume is a valuable contribution towards filling up the gap in our literature, although it does not by any means entirely close it. The different notices are written by different hands, three of them only by the Editor. They are, of course, of various literary merit, but all contain matter worth preserving on record, and which the present and future generations will be grateful for. We sincerely hope that this book may meet with the success it deserves, and thus encourage Prof. Gross to carry out his design more fully by issuing another volume, as he intimates his intention of doing, should he be supported in his present undertaking. The volume is well printed, and is prefaced by a handsome portrait of Dr. Rush.

A Practical Treatise on Military Surgery. By FRANK HASTINGS HAMILTON, M.D., late Surgeon Thirty-third Artillery, Fourth Brigade, Fourth Division, New York State Artillery; Professor of Military Surgery, and of Diseases and Accidents incident to Bones, in Bellevue Medical College; Surgeon to Bellevue Hospital; Professor of Surgery, and Surgeon-in-Chief to the Long Island College Hospital; Author of "Treatise on Fractures and Dislocations." 8vo. Pp. 234. New York: Baillière Brothers. 1861.

THE name of Professor Hamilton would be in itself enough to put this admirable book in the hands of every young man interested in this special subject. We cannot refrain, however, from saying a few words on its intrinsic merits. With the exception of the chapters on Dysentery and Scurvy, contributed by Dr. Austin Flint and Dr. Benjamin W. McCready respectively, the whole work is from the accomplished pen of the author, who courteously acknowledges, however, in general terms, the valuable assistance he has had from a number of Surgeons of the United States Army and Navy, by which the rapid completion of his work has been greatly aided.

The practical nature of the book may be gathered from the titles of the principal chapters. Thus, after the very interesting and valuable introduction, we have in Chapters II. The Examination of Recruits; III. General Hygiene of Troops; IV. Bivouac, Accommodation of Troops in Tents, Barracks, Billets, Huts, &c.; V. Hospitals; VI. Preparation for the Field; VII. Hygienic Management of Troops upon the March; VIII. Conveyance of Sick and Wounded Soldiers; and in the remaining Chapters the casualties and diseases of army life, with their methods of treatment. A useful Appendix is added, which contains much information of special value to medical men intending to enter the United States service.

In Chapter II., the various disqualifying diseases and imperfections which should lead to the rejection of candidates for enlistment are very fully given, together with the mode of examination and a printed form, such is used by the United States Surgeons to record their observations, with the questions to be asked, copied from the manual of

the service. This must be specially useful to the surgeons of our volunteer regiments. The chapter closes with a copy of the regulations for the examination of recruits in the United States Navy.

In the Chapter on Military Hygiene, in treating of the important subject of temperance, the interesting fact is mentioned that during the Revolutionary War the Fourth Massachusetts Regiment lost, in three years, by sickness, *not more than five or six men*. This was at a time when the troops were not paid, and consequently were cut off from the luxury of stimulants. Similar facts were noticed during the second war with Great Britain, under precisely similar circumstances. We don't know when we have met with a stronger argument for temperance than this; it cannot be too diligently remembered at the present time. In the same chapter are very useful suggestions about soldiers' clothing, together with some strictures upon the fancy costumes of some of our volunteers, well worth considering.

The subject of habitations for the soldiers, in the field and in barracks, is well discussed in Chapter IV., and is very fully illustrated by wood-cuts, leaving little to be wished for in this department.

Chapter VI. contains useful information, in detail, with regard to the articles supplied by the United States service to its surgeons for the treatment of the sick and wounded. The Chapter on the conveyance of disabled soldiers is quite full, and is illustrated by abundant figures of litters of various kinds, ambulances, &c.

The subject of Anæsthetics, which has led to some discussion of late in our pages, is treated with reference to the admissibility of their use at all. Little is said of the comparative value or safety of chloroform or ether, but the preference of the author is given to the latter. From the large experience of army surgeons in the Crimea, as well as of our own military and hospital surgeons here cited, there seems to be very strong ground for believing that these inestimable alleviators of suffering are not altogether free from a compensating deleterious influence. Quoting McLeod, Dr. Hamilton says, "I never saw" (in the Crimea) "one case among our numerous amputations in which primary adhesion took place throughout the whole surface of the flaps." The author thinks the use of anæsthetics may have been the principal cause, and concludes the chapter by saying that he "would never employ them when the system was greatly prostrated by disease, or by the shock of a recent injury, unless the patient exhibited an unconquerable dread of the pain of the operation, or the operation was likely to prove exceedingly painful. It is our opinion, also, that anæsthetics sometimes, and especially chloroform, prevent the union of wounds by adhesion, or by first intention."

The concluding chapters on Hospital Gangrene, Dysentery and Scurvy require no special notice, but give a completeness to this useful work. The whole book is illustrated throughout by the experience of our own armies, and its authority with those who need it most at the present time will have great weight from this circumstance. It is very handsomely printed.

On Diabetes, and its Successful Treatment. By JOHN M. CAMPLIN, F.L.S. From the Second London edition. New York: S. S. & W. Wood. 1861. 12mo. Pp. 87.

THIS edition of Dr. Camplin's excellent little work contains a considerable amount of new matter relating not only to the treatment of

the disease, but to its pathology, including the results of Dr. Pavy's experiments. To those of our readers who are not acquainted with it, we would say that it is a valuable addition to our literature on the subject of this intractable disease, and one which every physician should read before undertaking to treat a case of glucosuria.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JUNE 13, 1861.

MEDICAL MATTERS AT FORT MONROE.—It had been our intention to notice the letter to the *Medical Times*, to which reference is made below, but our correspondent has so fully vindicated our medical authorities that we forbear even comment. We are not quite prepared to admit that any one of our recently appointed army medical officers is ignorant of the expectorant properties of ipecac and antimony, or of the composition of volatile liniment, and yet such would naturally be inferred from the communication of the aggrieved correspondent of the *Times*.

MESSRS. EDITORS,—I notice in the *American Medical Times*, New York, June 1, 1861, a letter signed E. K. Sanborn, and dated May 21, which reflects unnecessarily and unjustly upon the medical outfits of the Massachusetts Volunteers, as far as the Third and Fourth Regiments, then stationed at Fort Monroe, are concerned. Having been at the Fort at the time alluded to by the above writer, and having carefully examined the medical stores, at the request of one of the medical officers, with a view of obtaining, if possible, from the State, a further supply of articles believed to be needed, I can say from actual inspection that most of the articles said to be wanting in the "ponderous and expensive chests," generously furnished by the State and put up in the most excellent manner, had been placed in said chests, and were then conspicuously arranged on the shelves of the room used as a dispensary for the Third and Fourth Regiments, under Surgeons Holmes, Saville and Clarke.

The first complaint is "that there were absolutely no means of making ordinary volatile liniment, or any other embrocation"; now, both aqua ammonia and sweet oil were on the shelves of said dispensary, and I remember hearing Dr. Saville say that in an adjoining room was one of the Surgeons of the Vermont Regiment (and I feel quite positive it was the very writer of the letter in the *Times*), then suffering severely from an inflammation of the eyes (threatening vision) and the nasal and oral openings, caused a few hours before (May 14th) by the sudden escape of the glass stopper of a bottle of strong water of ammonia; there were also turpentine, camphor, and an abundance of narcotics, with which to make embrocations for a great variety of cases. If he ordered, as he states, the "outfit prepared for the Massachusetts Regiment, under the direction of the Medical Commission appointed by the government for that duty," he must have had the articles above alluded to, and it is quite certain he had aqua ammonia.

The second complaint is that there was "not a single expectorant,

nor any provision for making a cough mixture"; I saw there squills, ipecac, copaiba, tartrate of antimony, and Dover's powder, and the grass beneath his feet was studded with wild garlic in every direction. On a second trip to the Fort on May 22-26, I carried to the surgeons a full supply of cubebs, and also colchicum, and an additional amount of squills in case of need. There was also copaiba and sweet spirits of nitre enough for the "transitory penalty of social indiscretion," supposing his regiment had been guilty of such. Every physician has his hobbies in the way of medicines, and especially if confined to the comparatively restricted list of country practice, and is apt to think that if he have not his favorites by him he has nothing proper to work with; but the army or navy surgeon must have invention enough, by skilful combinations, to make one drug answer all its indications, throwing away the routine, the cumbrous preparations, the sugar-coated pills, and the niceties of civil practice. I have nothing more to say, in regard to the above letter, except that the writer could not have seen the outfit of the Massachusetts regiments, or could not have known what he did have, or wished to question the ability or careful supervision of the Massachusetts Medical Commission; and in either of these cases his complaints are utterly groundless.

Fort Monroe, on Old Point Comfort, Va., in lat. 37° N., is one of the healthiest localities on the Atlantic border, and one in every way suitable for a great central military rendezvous. Accessible by sea; easily communicating by the Potomac and Chesapeake with Washington and Baltimore, and also by the Elizabeth and James rivers with Norfolk and Richmond; free from miasmatic exhalations, with the heat tempered by the ocean breezes; it must be the fault of the government officers, if this station be not healthy. Fortunately, until the last of May, and until the mounting of the heavy guns was completed, the weather was uncommonly cool for the season, and the sun was oppressively hot only at mid-day; and frequent refreshing showers not only purified the air, but secured an ample supply of water for the cisterns upon which the Fort entirely depends. The men, considering the sudden change from civil to military life, and from cold New England to sunny Virginia, have been remarkably free from sickness. The prevailing complaints have been diarrhæas, colds, coughs, and rheumatic affections, from insufficient tent accommodations, unavoidable exposure to the changes of the weather, improperly prepared food, and a comparative scarcity of vegetables. There has been very great improvement in all these respects, and now, the men who are not stronger and healthier than when they left home, are few and far between. The ample facilities for sea-bathing will contribute greatly to the health and comfort of the troops, and diminish the tendency to parasitic affections so common among large masses of men, where water is scarce and soap a burden. A few men have been sent home invalided with hernia, doubtless brought on or aggravated by mounting cannon. Most of the 3d and 4th regiments are three-months men, and have undergone no medical examination, and accordingly comprise many who would be rejected by the examination preparatory to being mustered into the United States service. It is believed that most of them are sufficiently removed from infancy to incur little danger of contracting the measles.

For the benefit of the men, and the comfort and dignity of the surgeon, it would be well if the strictly military officers of regiments

understood better the common rules of hygiene, and could be made to feel, as Napoleon did, that disease (and from unnecessary causes too) kills more of an army than do the sword and bullet. Surgeons ought to have more to say, and all that is to be said, on the locality of camps, and ought to inspect personally all sanitary arrangements in respect to cooking, tents, personal cleanliness, and apparel; then we should hear less of dysentery, pneumonia, rheumatism, sun-stroke and typhoid diseases, and a military hospital would cease to be a pest-house or a black-hole, which many enter but few leave alive. Then we should have our Larrey, and Baudens, and Hennen, and Guthrie, and perhaps also our Paré, whose very presence in a camp would be victory, in the soldier's consciousness that his wounds would receive the tenderest and most skilful attention. K.

EXAMINATION OF MILITARY SURGEONS.—We are requested to announce that the Examining Committee for the examination of regimental surgeons will hereafter meet once a week, Friday at 12, M., at the house of Dr. George Hayward, No. 16 Pemberton Square.

Dr. S. Kneeland, jr., recently read a communication to the Boston Society of Natural History, on the respiration of the fishes of the blenny family and genus *pholis*, called shauny in Europe, and of which a few specimens have been taken in Boston Harbor.

The shauny has the habit of creeping out of water by means of the ventral fins as the tide recedes, hiding in crevices of the rocks, and there remaining until the tide again rises; they have been known to live thirty hours in a dry box. In this fish there is no air-bladder; the gill openings are very large, and would seem to permit the gills to become dry very soon, and produce death as soon as in the mackerel and other fish with large gill openings; there does not appear to be any special apparatus for separating the leaflets of the gills for admitting and retaining air, and thus delaying the period of asphyxia; there is no labyrinthine arrangement as in the climbing perch (*Anabas*), nor the small branchial openings of the eels.

It seems most likely that the skin is the principal medium through which respiration is effected in this fish while in the air, especially as the body is soft and scaleless. We know that this cutaneous respiration is sufficient to purify the blood in some fishes, as the *Synbranchus* of Guiana, which is found buried in the earth at a considerable distance from water; and also in frogs and salamanders, both adult and young.

Professor Agassiz observed that although the gill openings in this fish are very large, the cheeks, as in blennioids generally, are much swollen, and the gill-covers fit very closely, and, the branchial rays being soft, may serve to retain the water in the gills for a considerable time.—*Proc. of Soc. of Natural History*.

UNG. HYDRARGYRI NITRATIS.—*Messrs. Editors*,—There are but few medicinal agents held in higher esteem by the profession than the ung. hydrargyri nitratis.

It would doubtless be much oftener employed if a uniformly good article could be obtained of the dispensary druggists, or could physicians easily and successfully prepare it themselves. The last edition of the U. S. Pharmacopœia orders neats-foot oil in its fabrication, instead of olive oil, as formerly directed. This substitution is certainly unfortunate, as the resulting ointment is usually less satisfactory than that prepared from the materials formerly employed. The cause of failure is owing mainly to the fact that it is almost impossible to procure in the market true neats-foot oil, and the article used is bad. No variety is so uniformly adulterated as this. Indeed, that which is offered by dealers, is often entirely factitious. It is a semi-fluid compound, made up of pea-nut oil, fish oil, rancid lard, with tallow, and possessing a most disgusting odor. The true oil

has, indeed, a peculiarly unpleasant smell which it communicates to the ointment, and renders it unfit for use.

Various substitutes have been proposed in the medical and pharmaceutical journals, among which have been linseed, pea-nut, and even bear's oil; but none of them furnish quite satisfactory results. After experimenting with a great variety of oleaginous substances with the view of improving the formula, I have been led to adopt fresh butter and lard, as furnishing the most desirable preparation. The formula is as follows:—Pure mercury, 1 oz.; nitric acid (sp. grav. 1.40), 14 fluidrachms; fresh butter, 6 oz.; lard, 6 oz. Dissolve the mercury in the acid, under a draught, and stir with a glass rod until the nitrous fumes have escaped. Melt the butter and lard together, elevate the temperature to 120 deg. Fahr. and pour in the acid solution. Perfect reaction will occur in the course of a few hours, the mass will puff up, evolving nitrous vapors freely. It should be stirred occasionally with a wooden or porcelain spatula. When cool, the result will be a very perfect golden-colored ointment, of the right consistency, which will remain unchanged for many months.

The butter should be of the best quality, and, if salted, must be kneaded in tepid water until all the saline particles are removed. The mercury should be free from tin and other impurities. If large quantities are prepared, the reaction is sufficiently rapid and perfect when the temperature remains at 100° Fahr. I have found that equal parts of butter and lard make a much finer ointment than butter or lard alone. The adoption of the above formula leaves little to be desired in the preparation of this useful ointment.

JAS. R. NICHOLS.

12 Kilby Street, June, 1861.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, June 8th, 1861.

DEATHS.

	Males.	Females.	Total.
Deaths during the week,	41	28	69
Average Mortality of the corresponding weeks of the ten years, 1851-1861,	34.9	31.5	66.4
Average corrected to increased population,	74.14
Deaths of persons above 90,

Mortality from Prevailing Diseases.

Phthisis.	Chol. Inf.	Croup.	Scar. Fev.	Pneumonia.	Varicella.	Dysentery.	Typ. Fev.	Diphtheria.
13	4	1	2	7	1	0	0	1

METEOROLOGY.

From Observations taken at the Observatory of Harvard College.

Mean height of Barometer,	30.067	Highest point of Thermometer,	80°
Highest point of Barometer,	30.304	Lowest point of Thermometer,	43°
Lowest point of Barometer,	29.802	General direction of Wind,	N.N.E.
Mean Temperature,	60°-0	Am't of Rain (in inches)	2.28

From Observations taken by Dr. Ignatius Langer, at Davenport, Scott Co., Iowa. Latitude, 41.31 North. Longitude, 13.41 West. Height above the Sea, 729.

		BAROMETER.				THERMOMETER.				RAIN.		Mean Amount of cloud, 0 to 10.
		7 A.M.	2 P.M.	9 P.M.	Mean Height.	7 A.M.	2 P.M.	9 P.M.	Mean Height.	Time, 100 minutes.	Mean, 127.	
Monday,	May 27,	29.29	29.31	29.31	29.31	56	66	57	62	0 hours.		6
Tuesday,	" 28,	29.34	29.38	29.44	29.39	54	64	57	62	0 hours.		
Wednesday,	" 29,	29.54	29.54	29.55	29.54	54	63	55	62	0 hours.		
Thursday,	" 30,	29.53	29.51	29.46	29.50	53	68	62	62	0 hours.		
Friday,	" 31,	29.47	29.40	29.37	29.41	57	64	63	63	0 hours.		
Saturday,	June 1,	29.38	29.33	29.29	29.33	65	80	69	69	0 hours.		
Sunday,	" 2,	29.20	29.19	28.25	28.81	68	77	68	68	0 hours.		

ERRATUM.—Page 317, 4th line of 2d paragraph, for "keetos" read *kestos*.

DEATHS IN BOSTON for the week ending Saturday noon, June 8th, 69. Males, 41—Females, 28.—Accidents, 2—apoplexy, 1—congestion of the brain, 1—disease of the brain, 2—inflammation of the brain, 1—bronchitis, 1—cancer, 1—carbuncle, 1—cholera infantum, 4—cholera morbus, 1—consumption, 13—convulsions, 1—croup, 1—cystitis, 1—debility, 3—diphtheria, 1—dropsy, 1—dropsy of the brain, 5—scarlet fever, 2—haemoptysis, 1—disease of the heart, 2—infantile disease, 2—disease of the kidneys, 2—congestion of the lungs, 1—inflammation of the lungs, 7—old age, 1—paralysis, 1—premature birth, 1—puerperal disease, 2—rheumatism, 2—scrofula, 1—smallpox, 1—suicide, 1—unknown, 1.

Under 5 years of age, 26—between 5 and 20 years, 3—between 20 and 40 years, 16—between 40 and 60 years, 14—above 60 years, 10. Born in the United States, 46—Ireland, 18—other places, 5.